

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method of cleaning at least one surface of an optical device disposed in a vacuum chamber, which device is at least partially contaminated by contaminants introduced by a radiation source, the method comprising the acts of:

adjusting at least one of a temperature prevailing on the at least one surface and a pressure in the vacuum chamber such that the contaminants hitting the at least one surface are removed from a first portion of said at least one surface; and

collecting the contaminants at at least one obstacle located at a second portion of said at least one surface, wherein said at least one obstacle includes at least one recess formed in said at least one surface.

2. (Previously Presented) The method as claimed in claim 1, wherein the temperature of the at least one surface is set in a range from around 200°C to around 600°C.

3. (Previously Presented) The method as claimed in claim 1, further comprising the act of at least one of heating and cooling the at least one surface of the optical device.

Claim 4 (Canceled)

5. (Previously Presented) The method as claimed in claim 1, wherein the obstacle further includes at least one elevation.

6. (Previously Presented) The method as claimed in claim 5, wherein a shape of the elevation has at least one of a strip-like, a cylindrical and a peg-like shape.

7. (Previously Presented) The method as claimed in claim 5, wherein the elevation is arranged so as to run approximately or

fully parallel with rays emitted from the radiation source along the at least one surface.

8.(Previously Presented) The method as claimed in claim 5, wherein the elevation includes at least one of copper, nickel and further material configured to promote formation of accumulations of the contaminants.

9.(Previously Presented) The method as claimed in claim 5, wherein the elevation is applied to the at least one surface of the optical device by a CVD process.

10.(Previously Presented) The method as claimed in claim 1, wherein the recess includes at least one of a slot, a groove and a hole.

11.(Previously Presented) The method as claimed in claim 1, wherein the recess is produced by at least one of a photochemical process and a laser treatment.

12. (Previously Presented) The method as claimed in claim 5, wherein a distance in a range from a few μm to roughly one millimeter exists between the elevation and the recess.

13. (Previously Presented) The method as claimed in claim 1, wherein the contaminants are removed from the at least one surface of the optical device by a chemical process.

14. (Previously Presented) The method as claimed in claim 1, wherein the at least one surface is provided with a coating.

15. (Previously Presented) The method as claimed in claim 14, wherein the coating is executed with a layer thickness of up to approximately 0.5 nm.

Claims 16-32 (Canceled)

33. (New) The method of claim 1, further comprising the act of removing the contaminants from the at least one obstacle, wherein the removing act includes the acts of:

providing a reaction partner to react with the contaminants to form a product; and

removing the product via a pump system connected to the vacuum chamber without dismantling of the optical device.